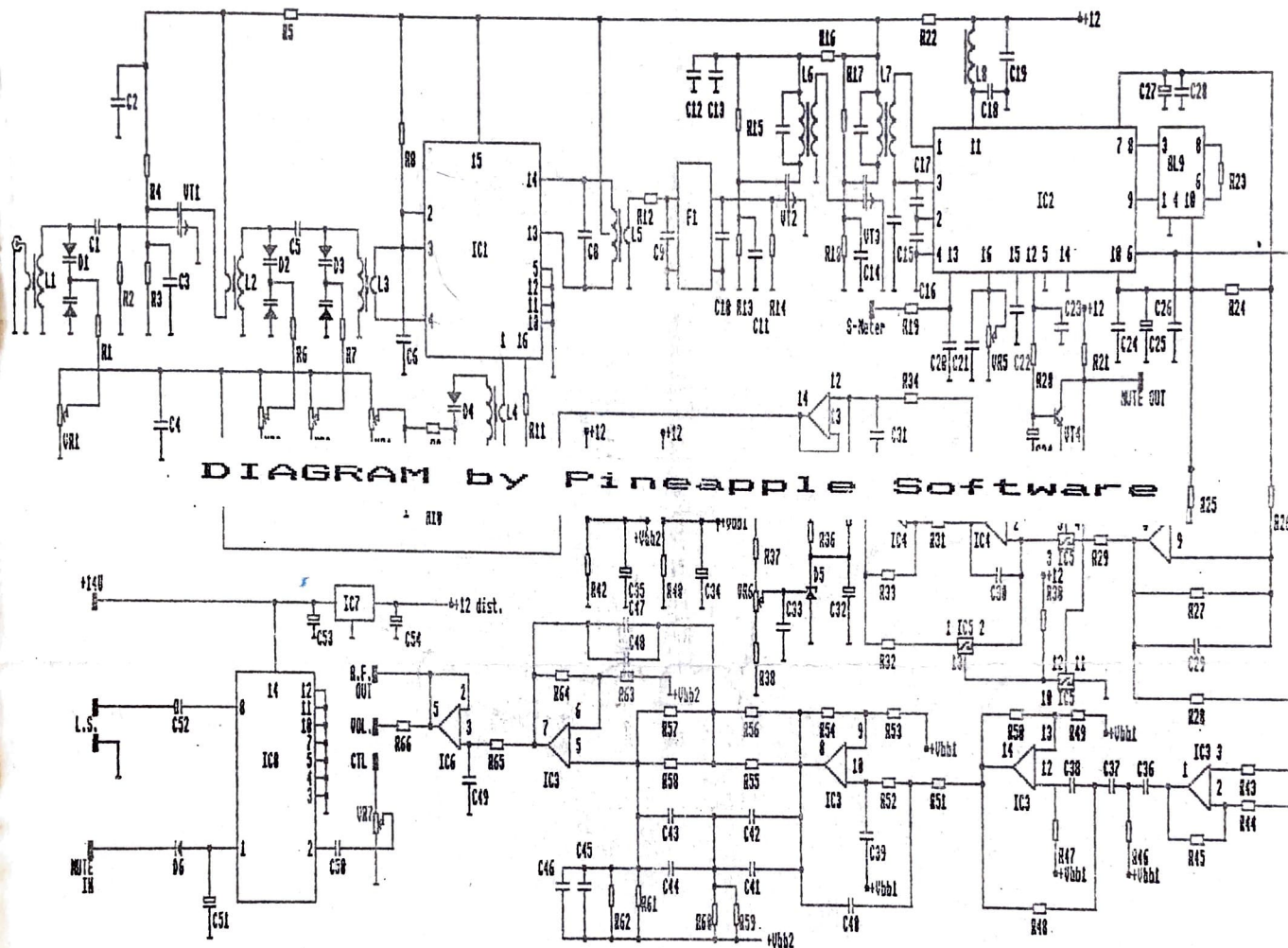


ABUG



ACORN & BBC
microcomputers
USER GROUP
Sheffield



ABUG Newsletter No. 28

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DIARY

August 21	Watnall	Visit to Weather Station
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September 18	Radcliffe	Visit to Power Station
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VISITS

As was announced in the last newsletter, the next 'formal' meeting will consist of a visit to Watnall Weather Station. The numbers for the visit are limited to 20, and these were all taken up at the last meeting. The members concerned are making their own way to Nottingham, to meet at the weather station at 7:30.

We have another visit organised for September 18, to the Radcliffe-on-Stoar Power Station, and there are no restrictions on numbers this time. If there is sufficient interest, we will organise a coach - please contact the Chairman or Secretary if you are interested.

THE KURZWEIL MACHINE

Among the problems that beset the life of the blind, one of the most restrictive is their inability to read printed books. There are books in braille and "talking books" recorded on magnetic tape, but mastering braille is not easy and in both cases the number of titles available is limited. We sighted readers are terribly lucky in having access to the biggest store of information in the world. Each year about 60,000 new titles are published in English, and the total number of titles available is about half a million. There are also about 60,000 magazines and newspapers. Whatever branch of knowledge interests us, we can be sure that there are adequate sources of information available in English.

Little of this treasure has been available to the blind. Talking books are limited to only 5000 titles in Great Britain (40,000 in the U.S.A.), to which can be added 6000 books and 60 periodicals produced in braille. It's like going from a palace into a poorhouse.

Recently, however, a solution has been found to the problem, thanks to the computer. In a room of Sheffield Central Library there stands a Kurzweil machine. It consists of a keyboard (without letters, of course), an illuminated glass panel on which you put the book, and a dedicated computer. The light is reflected from the paper of the book and a series of photoelectric cells recognize the letters optically. The computer joins them together in words and works out how to pronounce them, using its specially programmed rules. This is much

better than having a set vocabulary, because it gives the machine the ability to read any sort of subject matter. Finally, it uses a voice synthesizer to speak the text. The machine tries to read a whole sentence before speaking it, so as to take account of the punctuation and give the proper intonation to its voice. When it begins a new text, it often makes mistakes in the first sentence, because it has not got used to the particular size and variety of the printed (or typed) characters, but it learns by experience and soon becomes more successful as it goes on. It is often a good idea to make it read the first paragraph a second time. Really difficult words, such as some names or quotations from a foreign language, can if required be read out letter by letter.

The user can regulate the speed of reading, the tone and loudness of the voice. If the text is confidential, the machine can switch off the loudspeaker and speak through headphones. If the intending user can't visit the library, or if he wants to have a permanent copy of what it has read, the Kurzweil machine can be connected to a cassette recorder and a tape made to be taken away.

The cost of the machine is £25,000, which puts buying one outside the reach of the ordinary person. Fortunately, all he has to do is to go into the library and use the machine there. Service is free to blind users, thanks to Sheffield corporation and the government's programme of urban development. Fifteen members of the library staff have been trained to operate the machine and explain its working to the public. After 20 or 30 minutes of training the blind can use the machine to read an ordinary book. If a blind person wants to consult more difficult material, (in columns, or with pictures or diagrams), instruction will take a little longer.

The machine has its limitations. It cannot describe illustrations, and it has difficulty in reading newspapers, because of the frequent changes in the type sizes. But it certainly gives access for the first time to millions of printed books and periodicals. The machine in Sheffield Central Library is only programmed to read English, but for other countries, modifications can be made to the program enabling it to read Spanish, Italian and other languages.

B. C. Sexton.

Adapted from an article in the magazine "Lingua e Vita".

REVIEW of DIAGRAM by PINEAPPLE SOFTWARE

A large number of CAD/drawing programs for the Beeb are coming onto the market, ranging from the very simple sketch-type up to 'professional'. The costs of these packages also varies between a few pounds and £400+. The wide variety of trackball, mouse and similar devices are also providing accompanying software, usually dedicated to the particular device.

Pineapple advertise the capabilities of DIAGRAM in quite a lot of detail, and it is fair to say that their claims are justified. As a drawing program, it is interesting to note that no drawing operation as such is performed. The Beeb's graphics are not used, the 'drawn' output being entirely character-based icons. The icons can be created using multiple character, the maximum size being four wide by three high. The limitation on this use is that a maximum of 128 characters is available. However the character-base has permitted the inclusion of DIAGRAM's best and most impressive feature, its scrolling. Each drawing or diagram can consist of several 'screens', and the area in view can be scrolled, by use of the cursor keys, and the display data is read directly from the disc. The size of drawing is limited only by the storage area of the disc.

The creation of icons for use in a drawing is very straight forward, and a previously defined set can be transferred to a new drawing. Insertion of the icons is again very simple using the cursor keys, return and several of the user defined keys. This operation does give the feel of drawing.

The software includes a very good printer routine, which gives a full range of hardcopy options. Any portion of the drawing may be sent to the printer, the only condition being a maximum width of three screens (240 columns for normal width printers). Three choices of scale or definition of the drawing are available. As with the scrolling, the data for the hard copy is taken directly from the disc. The printing capabilities are very impressive.

The programs are on a forty track disc, but a utility to transfer to eighty track is included. Another interesting feature of the package is that the software is included in two forms. It is a suite of programs set to run using shift/break, but also on the disc is a 'compendium' of the programs set to run in sideways RAM, using the ROM filing system. This seems to be one of the least used of the Beeb's filing systems and DIAGRAM demonstrates that it is a filing system that merits much more attention.

The package comes complete with a function key strip, and a reasonable manual. Each copy of DIAGRAM has its own serial number, and Pineapple Software state that they will regularly send updates to owners, free of charge, subject to out-of-date discs being returned. This is quite an offer, and as yet nothing has materialised. The software includes

two sample programs, and these clearly show the strengths and weaknesses of DIAGRAM. The circuit diagram provided is the one used in their advertizing, and is clearly the most apt use. The program does not allow for the easy use of large or varied curves or diagonal lines, and this limitation narrows its possible applications. It is probably best used for circuit diagrams, charts, networks, flowcharts, timetables etc., and here it is probably the most effective software currently available.

John Bramwell

COVER

The cover was produced by John Bramwell using DIAGRAM. The DIAGRAM package costs £25 from Pineapple Software, 39 Brownlea Gdns, Seven Kings, Ilford, Essex IG3 9NL.

FOR SALE

3M Discs (Boxes of 10)

40 track, single side £12.50

40 track, double side £16.50

80 track, single side £20.00

80 track, double side £22.00

Available at most club meetings.

Also occasionally available:

3M Disc drive cleaning kit £10

3M Disc binder - holds 20 discs £6

Tandy monochrome (green) VDU £30 ono

Tandy CGP 4 pen plotter £75 ono

Contact Bob Hindle on Sheffield 680379

40 track SS disc drive + leads £75 ono : Grafpad + lead and software £70 ono

Contact Pete Frith on Sheffield 389165 after 6pm (Mon-Fri)

Penman Plotter + leads and software £240 ono

Contact Mike Robinson on Sheffield 342870